REMARKS

Applicant appreciates Examiner's thorough review of the application. The Specification has been amended to address a change in legal interpretation regarding the Abstract. Claims 1–4, 8, 10, 16, 19, 22 and 23 are amended herewith and Claims 5–7, 9, 11–15, 17, 18, 20 and 21 are as originally provided. No new material has been added. Reconsideration of the application is respectfully requested.

To assist in reviewing Applicant's response: where Applicant has quoted Examiner's office action, the quoted material is single-spaced and indented and Applicant's response to Examiner's concerns is in bold print.

Under *Claim Objections,* in para. 1 of the office action, Examiner states:

> Claims 1, 2 and 19 are objected to because of the following informalities:
> As for claim 1, on line 14, the antecedent basis for "said data" is unclear.
> As for claim 2, the antecedent basis for "said at least one change" is unclear.
> As for Claim 19, the antecedent basis for "said optical receiver" is unclear.
> Appropriate corrections and clarifications are required.

Applicant has amended Claims 1, 2 and 19 to address Examiner's concerns.

Further, Examiner under *Claim Rejections – 35 U.S.C. § 102* Examiner quotes 35 U.S.C. § 102 (b).

In para. 2 of this section, Examiner states:

> Claims 1, 2, 4, 7, 9, 14, 15, 22 and 23 (sic, 11) are rejected under 35 U.S.C. 102(b) as being anticipated by Sayka et al. US5743135.
> With respect to claims 1, 2, 4, 7, 9, 11, 14, 15, 22 and 23, Sayka et al. disclose a system (300) for monitoring and alerting (sic) changes by measuring optical reflections from a media (308) adjacent a part of said system comprising: an array of optical fibers (351-356), arranged vertically, attached to a support (360, a rigid tube), each optical fiber in said array of optical fibers having an end exposed orthogonal to said media; wherein optical signals (from 320) are maintained on each said optical fiber during the operation of said system, and wherein said array of optical fibers is configured to provide a pre-specified level of detail regarding said changes (col. 5); at least one source (320, LED emits red light) in operable communication with each said optical fiber during the operation of said system; at least one optical coupler (341-346) is provided to connect each said optical fibers to at least one source (320) and/or photodetectors (380, optical receiver); and at least one sub-system (320, 330, 370, 380, 390, 392, 394) in operable communication with each said optical fiber during the operation of said system, wherein said sub-system processes data obtained from said array of optical fibers to provide real time alerting to said changes, and wherein said

sub-system records and display said change (col. 4-5); wherein the sub-system includes a processing and control device (390) connected to a display (392).

Sayka et al.'s system inherently performs claimed method step (claim 23).

As noted above, Applicant has amended Claims 1, 2, 4, and 22–23 to both address Examiner's concern and further clarify the application of Applicant's invention. Claims 7, 9, 14, and 15 depend from Claim 1 or Claims dependent upon Claim 1 and the amendments made to independent Claim 1 serve to place these dependent claims in form for allowance. Applicant's invention uses the same fiber to both transmit and receive each signal over a fixed length optical fiber in a fixed array. Applicants' invention uses no moving parts as does Sayka et al. (the float). The float is an integral part of the Sayka et al. invention and thus Applicants' invention is distinguishable from Sayka et al. in not needing a float, a distinction that overcomes any 35 U.S.C. § 102(b) objection *per se*. Applicants' invention must have the face of the open end of each optical fiber orthogonal to the media to be measured for the mathematics to work. (p. 5, lines 15–26) Such is not the case for the Sayka et al. invention. It is not physically possible for the Sayka et al. invention to work as intended if the Sayka et al. device were configured as Applicant's invention is intended to be configured in a preferred embodiment. (Fig. 8)

Applicant respectfully disagrees with Examiner's characterization of his invention. Differences between Applicant's invention and the Sayka et al. device include:

1. **Applicant's invention requires no moving parts as the collection portion is an array affixed to a support. (p. 3, lines 30–31; p. 4, lines 20–21 (method); p. 6, lines 15–17, 27–29; Figs. 3 and 8)**
2. **Applicant's invention has the ends of the optical fibers arranged orthogonal to the long axis of its support (p. 3, lines 20–22, 30–31; p.4, lines 22–23 (method), Fig. 3) which is different from the manner in which Sayka et al. arrange the ends of their fiber optics to the inner sides of the tube to measure the response at the position of the float. (Figs. 1 and 3)**
3. **As opposed to the Sayka et al. device operating only in fluids and requiring a float, in preferred embodiments, Applicant's invention is**

buried in a solid, e.g., sediments, and preferably employs an anchor to assure stability. (p. 4, lines 16–17; Fig. 8)

4. Applicant's invention uses a fixed configuration to both measure a "pre-specified level of detail" (p. 3, lines 25–26, p. 4, lines 24–25 (method)) and sense change in the characteristics of the media (p. 3, lines 18–21, 25–26) not just to determine if a correct type of media is present or the level of a fluid in a container. That is, Applicant's invention may be used in scientific explorations of scouring activities to measure both the amount and rate of scour (or conversely sedimentation), not just the position of a float at a given time. Applicant's invention works at specific locations in a volume that comprises both fluids and solids (sediments), the amount of each type amenable to change with the total amount available not being constrained by a fixed container. (Abstract)

5. Applicant's invention uses optical couplers (splitters) to efficiently send and receive signals on the same optical fiber. (p. 4, lines 1-2, p. 5, lines 1–2 (method); p. 6, lines 27–29; p. 7, lines 24–25; Figs. 4 and 5). In select embodiments of Applicant's invention, use of the couplers and a multiplexer enables Applicant's invention to be employed with a single light source, e.g., one LED. (p. 6, lines 17–19, Fig. 3)

6. In select embodiments of Applicant's invention, interference from ambient light is addressed via use of bandpass filtering (p. 8, lines 12–14, Fig. 5) or the use of a 3-KHz square wave light source (p. 8, lines 15–22, Fig. 4). For the Sayka et al. invention, ambient light in a closed opaque container is not such a problem.

7. For Applicant's invention to work as intended for monitoring, one need only establish a "baseline" reflection or transmission coefficient in the media in which it is immersed. For example, once Applicant's device is implanted in sediment and an initial reading of the response from the sediment is taken from those optical fibers embedded in the sediment, no further data need be recorded until such time as the

readings change. Thus the data that needs recording is that which indicates change. Further, until such change is indicated, the sampling rate may be low.

8. **The purpose of Applicant's invention is entirely different from the Sayka et al. device. (Abstract) Applicant's wish to know how an object's surface is "covered" or "uncovered" by an outside influence, e.g., a scouring or sedimentation event. The Sayka et al. device is designed to determine the level of the demarcation line of two fluids in a container.**

Further, Examiner, under the section *Claim Rejections – 35 U.S.C. § 103*, quotes 35 U.S.C. § 103 (a).

In para. 2 of this section, Examiner states:

> Claims 3, 5, 6, 8-13, 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sayka et al. US5743135.
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> With respect to claim 3, per the above discussion, Sayka et al. fail to teach a multiplexer.
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> Although Sayka et al. lack a clear inclusion of a multiplexer, the use of a known an (sic) available multiplexer would have been obvious to one of ordinary skill in the optic fiber art in order to provide more control to the receiving and/or processing of the signals.

Applicant notes that the purpose of a multiplexer is to reduce the complexity of a system by permitting separate functions to share a single device, thus reducing both the expense, size and complexity of the resultant system, while providing fewer components to maintain and eliminating the possibility of failure in the components that have been omitted. Other than these benefits, the multiplexer does not provide "more control to the receiving and/or processing of the signals."

The provision of a multiplexer has little to do with "providing more control to the receiving and/or processing of the signals." Applicant has submitted Claim 3 for claim differentiation purposes as well as to establish the possibility of using a multiplexer as an alternate configuration to reduce the complexity of the system.

> It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka by utilizing a multiplexer in order to provide a better management of the light and/or signals transmitted through the optical fibers.

No motivation is shown by the Examiner for anyone to take a device having specific application for determining a level of the demarcation between two fluids in a closed container, removing the float and the tube within which the float operates, and replacing it with a bundle of parallel optical fibers, each of a different length and each having a right angle bend at its terminus for detecting either scour or sedimentation at pre-specified locations within an open body of water.

As the USPTO recognizes in MPEP § 2142:

> The legal concept of *prima facie* obviousness is a procedural tool of examination which applies broadly to all arts. It allocates who has the burden of going forward with production of evidence in each step of the examination process. ... The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of non-obviousness. ... The initial evaluation of prima facie obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed *until the art has been shown to suggest* the claimed invention. (emphasis added)

"... the examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made." MPEP § 2142. The examiner must put aside knowledge of the applicant's disclosure, refrain from using hindsight, and consider the subject matter claimed "*as a whole.*"

There must be a basis in the Art for combining or modifying references. MPEP § 2143.01 states:

> The mere fact that references *can be* combined or modified does not render the resultant combination obvious unless the prior art *also suggests the desirability* of the combination. (emphasis added) *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Further, the U. S. Court of Appeals for the Federal Circuit (CAFC) has stated that "the mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious *unless the prior art suggested the desirability of the modification.*" (emphasis added). *In re Fritch*, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1784

(Fed. Cir. 1992) (citing *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

The court noted that "[to] prevent the use of hindsight based on the invention to defeat patentability of the invention, this court *requires the examiner to show a motivation to combine the references* that created the case of obviousness." *Id.* at 1357, 47 USPQ2d at 1457-58. The court further noted that there were three possible sources for such motivation, viz., "(1) the nature of the problem to be solved; (2) the teachings of the prior art; and (3) the knowledge of persons of ordinary skill in the art." *Id.* at 1357, 47 USPQ2d at 1458. The court noted that the Board had relied simply upon "the *high level of skill in the art to provide the necessary motivation*" *without explaining what specific understanding or technological principle within the knowledge of one skilled in the art would have suggested the combination.* Notably, the court said: "If such a rote invocation could suffice to supply a motivation to combine, the more sophisticated scientific fields would rarely, if ever, experience a patentable technical advance." *Id.* (emphasis added)

Paraphrasing Judge Linn from *In re Kotzab*, 217 F.3d 1365, 55 USPQ2d 1313 (Fed. Cir. 2000):

As to hindsight: A critical step in analyzing the patentability of claims pursuant to § 103(a) is casting the mind back to the time of the invention, to consider the thinking of one skilled in the art, guided only by the prior art references and the then-accepted wisdom in the field. ... Close adherence to this methodology is especially important in cases where the very case with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the invention taught is used against the teacher." (*Id.* at 1369, 55 USPQ2d 1316) (citations omitted).

As to motivation: Most, if not all, inventions arise from a combination of old elements. ... Thus, every element of a claimed invention may often be found in the prior art. *See Id.* However, *identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention. See Id.* Rather, to establish obviousness based on a combination of the elements disclosed in the prior art, *there must be some motivation, suggestion or teaching of the desirability of making the specific combination* that was made by the applicant. (*Id.* at 1369, 55 USPQ2d at 1316)

(citations omitted). Applicant's invention uses an array of optical fibers, each of a different length arranged along the length of a support to enable monitoring of an event in nature normally occurring below the surface of an open body of water. Typical events include scour from a Spring runoff or sedimentation from wave action. Sayka et al. employ a float in a closed container to determine a line of demarcation between two fluids in the container, a very benign application. No motivation exists to use the Sayka et al. device to do anything but collect data on the position of a movable float. It would be entirely unsuited to the task for which Applicant's invention is designed.

The prior art itself provides no apparent reason for one skilled in the art at the time of the invention to make a modification of the referenced patents, thus a *prima facie* case of obviousness is not made. Also, the Federal Circuit has repeatedly warned against using the applicant's disclosure as a blueprint to reconstruct the claimed invention out of isolated teachings in the prior art. *See, e.g., Grain Processing Corp. v. American Maize-Products*, 840 F.2d 902, 907, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988). *Also see, In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998).

> With respect to claim 5, per the above discussion, Sayka et al. fail to teach said optical fibers are plastic.
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> Although Sayka et al. lack a clear teaching of (sic) said optical fibers are plastic, selecting a specific type of materials for the optical fibers it would have been obvious to one of ordinary skill in the art in order to provide desired performances (sic) of the optical fibers.
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> It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka et al. accordingly in order to provide easier mounting and/or installing of the optical fibers.

The provision of plastic optical fibers has little to do with ease of mounting or installation. Applicant has submitted Claim 5 for claim differentiation purposes as well as to establish the possibility of using a robust configuration to withstand the harsh environment of open water in which extreme scour and sedimentation occurs during periods such as Spring runoff of a mountain stream or wave action during a tropical storm. Further, Applicant's rationale provided as above for Claim 3 apply here also, both Claims 3 and 5 being dependent upon Claim 1.

> With respect to claim 6, per the above discussion, Sayka et al. fail to teach said optical fibers have an index of refraction of approximately 1.492.

Although Sayka et al. lack a clear teaching of (sic) said optical fibers have (sic) an index of refraction of approximately 1.492, selecting a specific index of refraction for an optical fiber would have been obvious to one of ordinary skill in the optics art in order to provide more control to the modulation of the light and/or signal transmitted through the optical fibers.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka et al. accordingly in order to provide more control to the modulation of the light and/or signal in the optical fibers.

The provision of optical fibers with an index of refraction of 1.492 has little to do with control of the modulation but rather enables ready distinction between the end of the fiber optic cable and the media into which the cable is inserted, typically sediments (mud) or water. Applicant has submitted Claim 6 for claim differentiation purposes as well as to establish the possibility of using a configuration to readily distinguish the reflections from the end of the optical cable and the environment of open water in which extreme scour and sedimentation occurs during periods such as Spring runoff of a mountain stream or wave action during a tropical storm. Further Applicant's rationale provided as above for Claim 3 apply here also, both Claims 3 and 6 being dependent upon Claim 1.

With respect to claims 8 and 9, per the above discussion, note that Sayka et al. disclose the light reaching the photodetectors can be frequency filtered in order to enhance photodetectors' sensitivity but fail to teach a high pass filter and an amplifier.

Although Sayka et al. lack a clear inclusion of a high pass filter and an amplifier using a high pass filter in order to filter out the unwanted signal and/or unwanted components of a signal and an amplifier to increase an output signal to a desired level would have been obvious to one of ordinary skill in the electronic art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka et al. accordingly with inclusions of a high pass filter and an amplifier in order to provide a more accurate measurement results (sic) from the system.

The provision of a high pass filter with an amplifier has little to do with accuracy of results but rather enables ready distinction between ambient light and a desired signal, i.e., the reflection from the end of the optical fiber interface and the media into which the cable is inserted, typically sediments (mud) or water. The Sayka et al. device would not have this problem since it is inserted in a closed container, hence, Sayka et al. at the time the Sayka et al. device was invented, would have no motivation to add components that

would not yield any beneficial result with respect to their application. Applicant has submitted Claims 8 and 9 for claim differentiation purposes as well as to establish the possibility of using a configuration to readily distinguish the reflections from the end of the optical cable and the natural environment in open water in which extreme scour and sedimentation occurs during periods such as Spring runoff of a mountain stream or wave action during a tropical storm. Further Applicant's rationale provided as above for Claim 3 applies here also, Claims 3 and 8 being dependent upon Claim 1 and Claim 9 being dependent upon Claim 8.

With respect to claims 10 and 11, per the above discussion, Sayka et al. fail to teach said sub-system comprises a power meter.

Although Sayka et al. lack a clear inclusion of a power meter, using a known and available power meter to indicate the power of said sub-system would have been obvious to one of ordinary skill in the electronic art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka et al. accordingly with an inclusion of a power meter in order (sic) monitor the performance of the sub-system.

The provision of a power meter has little to do with monitoring the performance of the sub-system but rather is an alternate configuration to the circuitry provided in Figs. 4 or 5, including the high pass filter and amplifier combination. The Sayka et al. device would not have to use a power meter since it is inserted in a closed container, hence, Sayka et al. at the time the Sayka et al. device was invented, would have no motivation to add components that would not yield any beneficial result with respect to their application. Applicant has submitted Claims 10 and 11 for claim differentiation purposes as well as to establish the possibility of using a configuration to readily distinguish the reflections from the end of the optical cable and the natural environment in open water in which extreme scour and sedimentation occurs during periods such as Spring runoff of a mountain stream or wave action during a tropical storm. Further Applicant's rationale provided as above for Claim 3 applies here also, Claims 3 and 10 being dependent upon Claim 1 and Claim 11 being dependent upon Claim 10.

With respect to claim 12, per the above discussion, Sayka et al. fail to teach an umbilical cable.

Although Sayka et al. lack a clear inclusion of an umbilical cable, the use of a known and available umbilical cable would have been obvious to one of ordinary skill in the art in order to provide a stronger and/or more durable connecting means to connect devices and/or components of the system.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka et al. accordingly in order to provide a long life and/or durable connecting means.

The provision of an umbilical cable for the Sayka et al. device would be overkill as it is designed to operate in a completely benign environment in an enclosed container in a manufacturing plant, not in open water exposed to whatever natural forces may provide. Sayka et al., at the time the Sayka et al. device was invented, would have no motivation to add components that would not yield any beneficial result with respect to their application. Applicant has submitted Claim 12 for claim differentiation purposes as well as to establish the possibility of using a configuration that is able to withstand the environment in open water in which extreme scour and sedimentation occurs during periods such as Spring runoff of a mountain stream or wave action during a tropical storm. Further Applicant's rationale provided as above for Claim 3 applies here also, Claim 3 being dependent upon Claim 1 and Claim 12 being dependent upon Claim 3.

With respect to claim 13, per the above discussion, Sayka et al. fail to teach an anchoring device.

Although Sayka et al. lack a clear inclusion of an anchoring device, the use of an anchoring device to prevent vibrations or displacement of the system in order to provide better measurements or accurate results would have been obvious to one of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka et al. with the inclusion of an anchoring device to prevent any movements or shifting of the system order to provide a more reliable measurement results (sic) from the system.

The provision of an anchoring device for the Sayka et al. device would be overkill as it is designed to operate in a completely benign environment in an enclosed container in a manufacturing plant, not in open water exposed to whatever natural forces may provide. Further, the Sayka et al. device operates in a tube to "stabilize" it thus it would never need an anchor "embedded" in sediment. Sayka et al., at the time the Sayka et al. device was invented, would have no motivation to add components that would not yield any beneficial result with respect to their application. Applicant has submitted Claim 13 for claim differentiation purposes as well as to establish the possibility of using a configuration that is able to withstand the environment in open water in which extreme scour and sedimentation occurs during periods such as Spring runoff of a mountain

stream or wave action during a tropical storm. Further Applicant's rationale provided as above for Claim 3 apply here also, Claims 3 and 13 both being dependent upon Claim 1.

With respect to claims 16-18, per the above discussion, Sayka et al. fail to teach said source is energized using a cyclical signal.

Although Sayka et al. lack a clear teaching of (sic) said source is energized using a cyclical signal, energizing a source by using a cyclical signal would have been obvious to one of ordinary skill in the art in order to provide more control to the source.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka et al. accordingly in order to provide more control to the performance of the source. Further citations in claim 17 regarding square wave and in claim 18 regarding 3 KHz cycle would have been obvious for similar reasons set forth in the above discussion.

The provision of cyclical signals has little to do with "more control to the performance of the source" but rather enables ready distinction between ambient light and the desired signal, i.e., the reflection from the end of the optical fiber interface and the media into which the cable is inserted, typically sediments (mud) or water. The Sayka et al. device would not have this problem since it is inserted in a closed container, hence, Sayka et al. at the time the Sayka et al. device was invented, would have no motivation to add components that would not yield any beneficial result with respect to their application. This includes a complex and expensive source modulation device. Applicant has submitted Claims 16–18 for claim differentiation purposes as well as to establish the possibility of using a configuration to readily distinguish the reflections from the end of the optical cable and the natural environment in open water in which extreme scour and sedimentation occurs during periods such as Spring runoff of a mountain stream or wave action during a tropical storm. Further Applicant's rationale provided as above for Claim 3 apply here also, Claims 3 and 16 being dependent upon Claim 1, Claim 17 being dependent upon Claim 16 and Claim 18 being dependent upon Claim 17.

With respect to claim 19, although Sayka et al. lack a clear teaching of said photodetector is (sic) selected from a group consisting of a phototransistor and/or a photodiode, selecting specific type (sic) of photodetectors would have been obvious to one of ordinary skill in the art in order to provide a long lasting life of performance to the photodetector.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka et al. accordingly in order to provide a compact design of the system.

The provision of a particular version of photodetector has little to do with "providing a compact design of the system." Applicant has submitted Claim 19 for claim differentiation purposes as well as to establish the possibility of using alternate configurations of photodetectors to readily distinguish the reflections from the end of the optical cable and the natural environment in open water in which extreme scour and sedimentation occurs during periods such as Spring runoff of a mountain stream or wave action during a tropical storm. Further Applicant's rationale provided as above for Claim 3 apply here also, Claim 3 being dependent upon Claim 1 and Claim 19 being dependent upon Claim 8 which is dependent upon Claim 1.

With respect to claim 20, per the above discussion, although Sayka et al. disclose a microprocessor (320) but lack a clear inclusion of at least one multi-channel multiplexed data acquisition printed circuit board incorporating at least one analog-to-digital convert (sic); and software loadable on a personal computer for processing said data, it would have been inherently included, however, if not, it would have been obvious to one of ordinary skill in the art to modify Sayka et al. accordingly in order to provide sufficient means to process and/or manipulate signal (sic) and/or data obtained by the system.

The provision of a particular version of a processor, i.e., a multi-channel multiplexed PC board incorporating an A-D converter and software loaded in the processor provides an alternate configuration commensurate with the concept of claim differentiation. Applicant has submitted Claim 20 for claim differentiation purposes as well as to establish the possibility of using alternate configurations of hardware and software to achieve a desired result. Further Applicant's rationale provided as above for Claim 3 apply here also, Claims 3 and 20 both being dependent upon Claim 1.

With respect to claim 21, per the above discussion, Sayka et al. fail to teach said coupler is a four-port optical splitter.

Although Sayka et al. fail to teach said coupler is a four-port optical splitter selecting a specific type of couplers (sic) would have been obvious to one of ordinary skill in the art in order to provide a desired distribution of the signals.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sayka et al. accordingly in order to provide more control to the destination of the signals.

The provision of a particular version of a coupler, i.e., a four-port optical splitter, provides both a preferred embodiment and an alternate configuration commensurate

with the concept of claim differentiation. Applicant has submitted Claim 21 for claim differentiation purposes as well as to establish the possibility of using alternate configurations of hardware to achieve a desired result. Further Applicant's rationale provided as above for Claim 3 apply here also, Claims 3 and 21 both being dependent upon Claim 1.

Thus, Examiner has not made out a prima facie case of obviousness in regards to Claims 3, 5, 6, 8-13, and 16-21.

No new matter has been entered via this amendment. In view of the foregoing, it is respectfully requested that the subject application be passed to issue as amended hereby with amended Claims 1–4, 8, 10, 16, 19, 22 and 23 and original Claims 5–7, 9, 11–15, 17, 18, 20 and 21.

Respectfully Submitted,

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